Completed Return-On-Investment Project Case Study

United States Department of Energy
Office of Environmental Management
Fact Sheet

Reclaiming Radiologically Contaminated Areas

Savannah River Site, South Carolina

Original Problem

Respirators, protective clothing, fresh air suits, etc protect workers in radioactive areas. These activities result in generation of radioactive waste, contaminated laundry, large demands on health physics staff support, and worker productivity loss. These radioactive contaminated areas also increased personnel and environmental risks.

The ROI Project Solution

Through site-wide teaming arrangements, introduction of new decontamination and encapsulation technologies, and a challenging award fee, the SRS started to systematically decontaminate and release radiological contaminated areas in 1998. Workers are no longer required to wear the cumbersome protective clothing and gears in the non-contaminated areas. SRS plans to continue this effort through 2006.

DOE Monetary Benefits	
Cost	$1.8 million
Lifecycle Savings	$22 million
Return on Investment	225 %

Value Of Improvement

In 1998 alone, the site reduced the radiological hazards in over one hundred individual areas affecting 118,500 square feet of previously contaminated areas. This results in annual avoidance of 18,500 ft^3 of low level waste and 260,000 pounds of radiological laundry; operating efficiency improvements by saving 43,000 person hours each year of donning/ doffing of protective clothing and related apparatus, and significant risk reduction through reduced employee exposure to hazardous materials.

Lifecycle Waste Reduction	
Life Cycle Waste Reduction	2,600 m3
Operation Commencement Date	10/97
Project Useful Life (Years)	5

Benefits At-A-Glance

- Reduce employee risk
- Avoid over 18,000 ft3 of LLW annually
- Avoid generation of 260,000 lbs. of radiological laundry annually
- Improve efficiency by saving 43,000 hours from donning/doffing of personal protective clothing and related apparatus
- Develop cultural change that set expectation that area contaminated are to be returned to prior state upon completion of activity

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Summary Data

ROI Priority Area:	**New Waste Generation**
ROI Project Type:	**Source Reduction**
Project Cost:	**$1.8 Million**
Lifecycle Savings:	**$22 Million**
Implementing Group:	EM, SRS Site
Benefiting Group:	EM, SRS Site
Useful Life Years:	**5-10 years**
Return On Investment:	**225 %**
Lifecycle Waste Reduction:	**2,600 m3**

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